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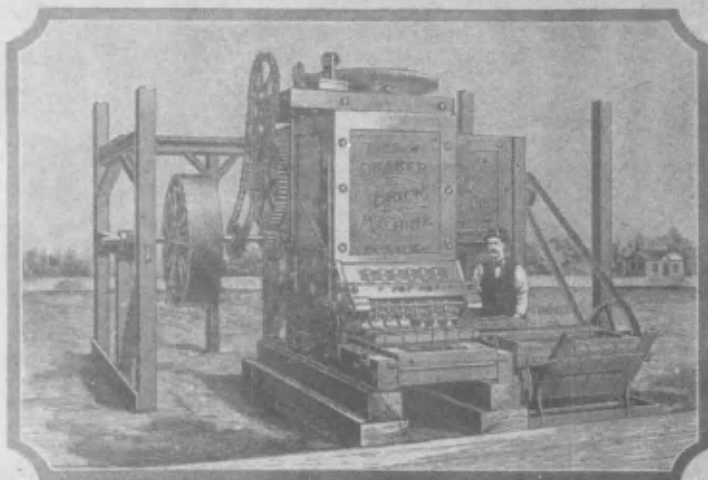


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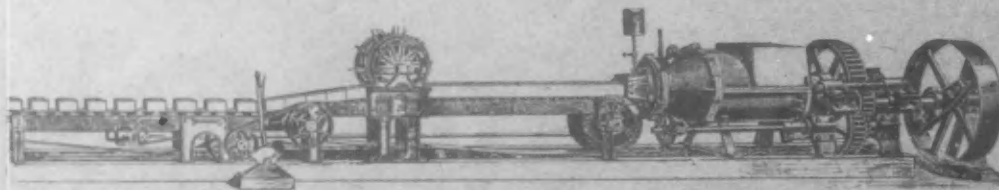
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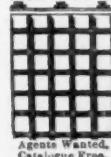
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THE BRICKBUILDER

VOL. II.

BOSTON, SEPTEMBER, 1893.

No. 9.

MURAL DECORATION TILES AND ENAMELS AT THE FAIR.

FROM Susa, Persia, to Lambeth, London, is a far cry; the walls of the palace of Artaxerxes and the walls of a Christian church are still farther removed from one another; 2000 B. C. appears, from the point of view of A. D. 1893, to be a period too remote for us to see it aught but dimly: and yet, judging from the faience exhibits at the World's Fair, Susa and Lambeth, the house of the Persian monarch and the ten thousand houses of the Galilean peasant, the mist-obsured depths of that "dark backward and abysm of time," and these bewildering, glittering, *fin-de-siècle* moments, are all united in one kingdom and time under the rule of a power whose influence no time can weaken and whose borders stretch beyond the reach of human ken.

The desire for beauty runs like a golden thread through all periods, and men blindly and passionately reach forth after it, impelled by those mysterious emotions which, common to all men and ages, have created religion and art, binding the then to the now, making an interval of centuries no barrier to artistic sympathy, which, transmitted through ages, enables the artist of to-day to know, appreciate, and understand his fellow of earth's younger years. To M. Emile Muller et Cie., of Ivry Port, near Paris, and to Messrs. Doulton & Co., of Lambeth, England, it is that thanks are due for the opportunity to compare easily archaic wall decorations and the latest developments in the art of decorating walls. This distinction is purposely made; for, while the Frenchman's exhibit shows ancient Persian decoration to be an organic part of the structure it beautifies, the English method is similar to the use of marble in the Italian churches of the Middle Ages, and the tiles (reference here is made to the beautiful dry impasto examples) are merely an applied veneer having no embodiment in the walls to which they are attached.

The use of enamels for decorative purposes is very early, and was brought to perfection by the Egyptians, their coloring being very brilliant and the glazes pure alkaline free from lead. The most remarkable examples extant are some clay plaques, now in the British Museum, about ten inches high, which were used to decorate the palace walls of Rameses II., at Tel ah Yâhûdiya, and these date

from 1300 B. C. This enamelled decoration represents men and animals in procession, which are executed in different colors, being partly modelled in slight relief, and then covered with enamel, the negroes being black, other figures white, red, or yellow; while the dresses are represented with the greatest richness and minute attention to detail. During the eighteenth and nineteenth dynasties, pottery was used in many ways for wall decoration, among other methods bricks of coarse clay being covered with "slip" (a mixture of finer clay, which is applied to the brick as a "face") and glazed with brilliant colors. In Persia, work of this character was widely used, the wall being modelled and the figures enamelled as in Egyptian work, the ground being generally of different colors and the work showing strong feeling of harmony and great vigor of line, and skill in decorative arrangement.

It is work of this character that Emile Muller exhibits, copied in modern materials with great faithfulness from the Frieze of Lions and the Frieze of Archers, once forming part of the palace of Artaxerxes at Susa, Persia, brought thence and placed in the Louvre by Mons. et Mme. Dieulafoy. This copy is a reduction in general, but the bricks are the size of the originals, differing from the Persian chemical composition, however, in being formed of a silicious composition which M. Muller calls stoneware. This material seems to have great hardness, and qualities of endurance, imperviousness to frost, etc., and is a specialty of this firm, who used it to an enormous degree in the balustrades, domes, friezes, medallions, etc., etc., of the last Paris exposition. These hollow stoneware bricks are arranged to form a low wall enclosing a bank of earth, in which plants and palms are planted. The front and two side walls of this enclosure are about three feet high, and round them marches in stately single file a procession of that kingly beast, the lion. The rear wall is some ten or fifteen feet high, and on it, beginning at the level of the top of the lower walls, is a panel, occupying the entire area, consisting of a wide border and a centre representing a procession of archers.

In order to understand the extraordinary vigor and bold appearance of this work (descended from times



EXHIBIT OF EMILE MULLER.

which we are apt to consider artistically unenlightened), it must be kept in mind that these figures of men and animals are not modelled and then applied to the surface, but are formed by the proper modelled advance and retreat of the bricks forming the wall, and that the joints of the brickwork are not interrupted at all but continue both horizontally and vertically through all the modelled surfaces. Therein lies to a very great degree its artistic merit, and we cannot but admire the ability with which the artist, needing a beautiful wall surface, instead of endeavoring to obtain it by any decorative veneer, has boldly seized upon and converted into a thing of beauty the wall itself; touching its surface into life, designing and executing with a perfect knowledge and mastery of his materials. The coloring is very harmonious and beautiful, and it may here be observed that this quality characterizes all the work of Mons. Muller's exhibit; most of the articles are reproductions of antiques, and it would seem

as if Mons. Muller was as appreciative of old tone as of old forms, for the softness of his colored stoneware is delightful, and a revelation to the eye accustomed to the brilliant and rather garish tints which most manufacturers seem to prefer.

Great softness of tone is obtained by the Persian enameller by avoiding large surfaces of self-color, and his background is a beautiful blending of yellow and brown, and a green deepening into a peacock blue, which colors are those used in tinting the beasts and the archers. The tints which in the figures sometimes cover three or four bricks are in the background so arranged that the three colors are all mixed in varying amounts of each, on nearly every brick; this gives the men and animals sufficient prominence, without rupturing the relationship that exists between them and the groundwork, for they are of the wall and not a foreign element on it. A new tone is used in the archer frieze, a portion of the drapery being colored gray.

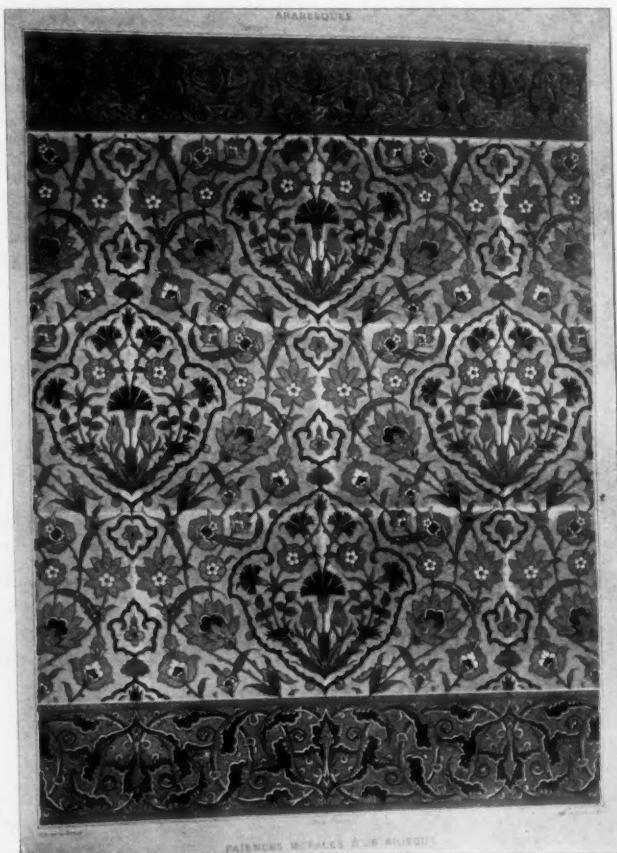
The bricks are six inches by three inches on face and are built in wide cement mortar joints. Other times, other manners, seem to be true; to this we might add other ideals, but whatever the cause, this fine and vigorous piece of work, bequeathed by a race of lion-hunting warriors, is as different from the rather febrile wall decoration of to-day as the untamed king of the forest and desert is to the animal we cage, and cow with a whip. Both they of to-day are very tame. The work has been discussed from its more interesting standpoint as an example of early work, but due credit must be given to Mons. Emile Muller et Cie. for the cleverness of their adaption and the beauty of their work. It is a matter of great regret that this firm has not thought it necessary to send over any floor or wall tiles. French methods and ideas would have been most interesting in comparison with those of America, Spain, Italy, and England; the entire section, however, is barren in this respect.

It must be confessed that with few exceptions the tiles that are exhibited in the Manufactures Buildings are not such as would captivate the attention, or of such beauty as to create general desire for their extended use as wall decoration; indeed, the imagination rather shrinks at the idea of inhabiting any room whose walls were formed of the hard mechanical and commonplace specimens which form the bulk of the output of to-day. The reason for this is hard to find, for, while their use in this capacity is a comparatively new one in northern countries, the Orient has known and appreciated their capabilities of mural decoration many hundreds of years; and there exist numberless examples of the most beautiful and magnificent kinds. Those who would see what wall surface might be, when treated in this manner, are referred to Jerome's picture in the loan collection of the art gallery, "The Snake Charmers," for the special observation of the wall behind the seated figures. In the Arabian house in Cairo Street, in the Midway, there is a most fascinating piece of work in the alcove in the western room, and the Damascene house, also on the Plaisance, affords other examples, all illustrating ancient work. In Oriental countries tiles were used in the most magnificent way throughout the Middle Ages, especially in Damascus,

Cairo, Moorish Spain, and the chief towns of Persia; and in Spain proper, tiles of a coarse kind of majolica were used during the sixteenth and seventeenth centuries, some examples, supposedly the work of Italians settled in Spain, still existing in Seville. In Spain we also find the wall tiles of the Alhambra, which are the most beautiful productions existing of Hispano-Moorish work, and some resemble majolica ware in technique, but the finest are designs taken from mosaic patterns of complicated geometrical interlacings. During the period comprised in the twelfth to the sixteenth centuries, floor tiles were used in Northern Europe. Majolica tiles, rich in color and pattern, were used in the fifteenth and six-

teenth centuries in Italy as pavements, few now remaining on account of the softness of the material, though one very fine piece of work is still to be seen in one of the chapels of S. Maria del Popolo in Rome, dating from 1480. Their introduction into England occurred during the sixteenth century, the importation being from Spain.

This brief summary shows that the manufacture was continuous, and if their artistic perfection at the present day only equalled their mechanical state, we could also say it was progressive. But there one pauses, for, much as one wishes it were so, a comparison of the illustrations of "L'Art Arabe" of Prisse D'Avennes (using his book as an example of many) and the modern tile catalogue shows that, even allowing for the difference in national tastes, the magnificent and truly beautiful designs which Mons. D'Avennes has gathered together are far superior to those offered for our selection by the mural decorators of to-day. Undoubtedly the religious command forbidding Mohammedans to depict living things was a great factor in this result in limiting to a confined field of decoration the artistic power which might otherwise have devoted itself to the production of a pictorial art similar to that of other countries. But even if the great artists of to-day are engaged in other things than the beautiful decoration, to which a less liberal code of ethics confined their brothers of the East, we have still the productions of these latter as an example,—beautiful designs of interlaced forms and lines of color, falling in soft brilliancy of glorious mesh over backgrounds of creamy white or yellow.



EXAMPLE OF ARABIAN TILE WORK.

REPRODUCTION OF A PAGE IN "L'ART ARABE," BY PRISSE D'AVENNES.

Their color is magnificent without crudeness, the design never errs in the direction of the too great "pictorialness" of the tiles of this year of grace, many of which have the carved ornament of stone and wood transferred to them in colors, and sin generally in utter violation of all appropriateness of application and of the agreement that should exist between design and material.

To this general reproach there are, happily, exceptions to which one may turn in hope for the future of this beautiful art, and chief among these (since the demand for pictorial effect seems to be irresistible) is what is known as the dry impasto process, which produces a tile of beautiful depth of color, and a freedom from glaze, permitting the representation of single objects of interest without the multitudinous and confusing high lights arising from surface reflection, a fact which, while not interfering with the effect of an all-over pattern, is fatal to the appearance of any single figure. Messrs. Doulton's particular example of this new departure is part of the decoration of a church wall, and represents a descending angel in an attitude of prayer, robed in bluey greens, with purple-shaded wings. The whole thing has considerable depth and richness of color and a grateful softness after the hard, cold appearance of similar subjects on glazed tiles. This process also permits of the use of a larger sized tile, which is an improvement, inasmuch as it gives more the true wall-surface appearance. The background to the angel is a pale yellow with a conventional design in darker tints, which is very pretty; and some parts of the robes are wonderful in the effect of texture.

The lack of glaze does not negative the washable properties always associated with tile, so that this gain of a material better suited for decoration in accordance with the current demand is a most valuable one and will do much to relieve the incompatibility existing heretofore between subject and material. This subject of tile pictures is a very difficult one to treat in a condemnatory way, still more so when the taste for them has resulted in the production of a very beautiful substance, eminently suited for mural decoration, and rendering almost imperishable any frescos its surface may be adorned with. But the more widespread uses of tiles seem to have been neglected

and their proper decoration, with a view to their greater domestic use, forgotten in other pursuits. Their extensive and triumphant use, however, in clubs and hotels, seems to be paving the way for the tile wall in the house, hitherto confined to the bathroom and kitchen, where its utilitarian qualities were more considered than its artistic merits; and we shall all probably welcome the day when paper and wood shall give way to the cleaner and more enduring clay. And as much as it is more enduring, so must it be more beautiful, and beautiful with a beauty founded on truth, and higher than passing fads. The field of their future usefulness is wide, and, seeing their probable position in the home, the question of beauty is paramount.

We have evidently strayed from the track: it is easy to start afresh, and, instead of surfaces that jar one to the soul, let us have walls beautiful for all time and all men. We must now aim at refinement rather than magnificence, and must also get rid of the idea that the combination of many pieces of clay, of various colors and various geometrical shapes, can constitute a decoration fit either for wall or floor; especially not for floors, where the area of resistance afforded by the cement should be as great as possible in proportion to the area sustaining the loosening blow of the heel. To this use of small pieces where large were required may be traced the character of easily getting loose now possessed by tile pavements, and also partly their abandonment in favor of marble tiles, which latter, on account of their size, have an area embedded in cement which is too large to be af-



EXAMPLE OF ARABIAN TILE WORK.

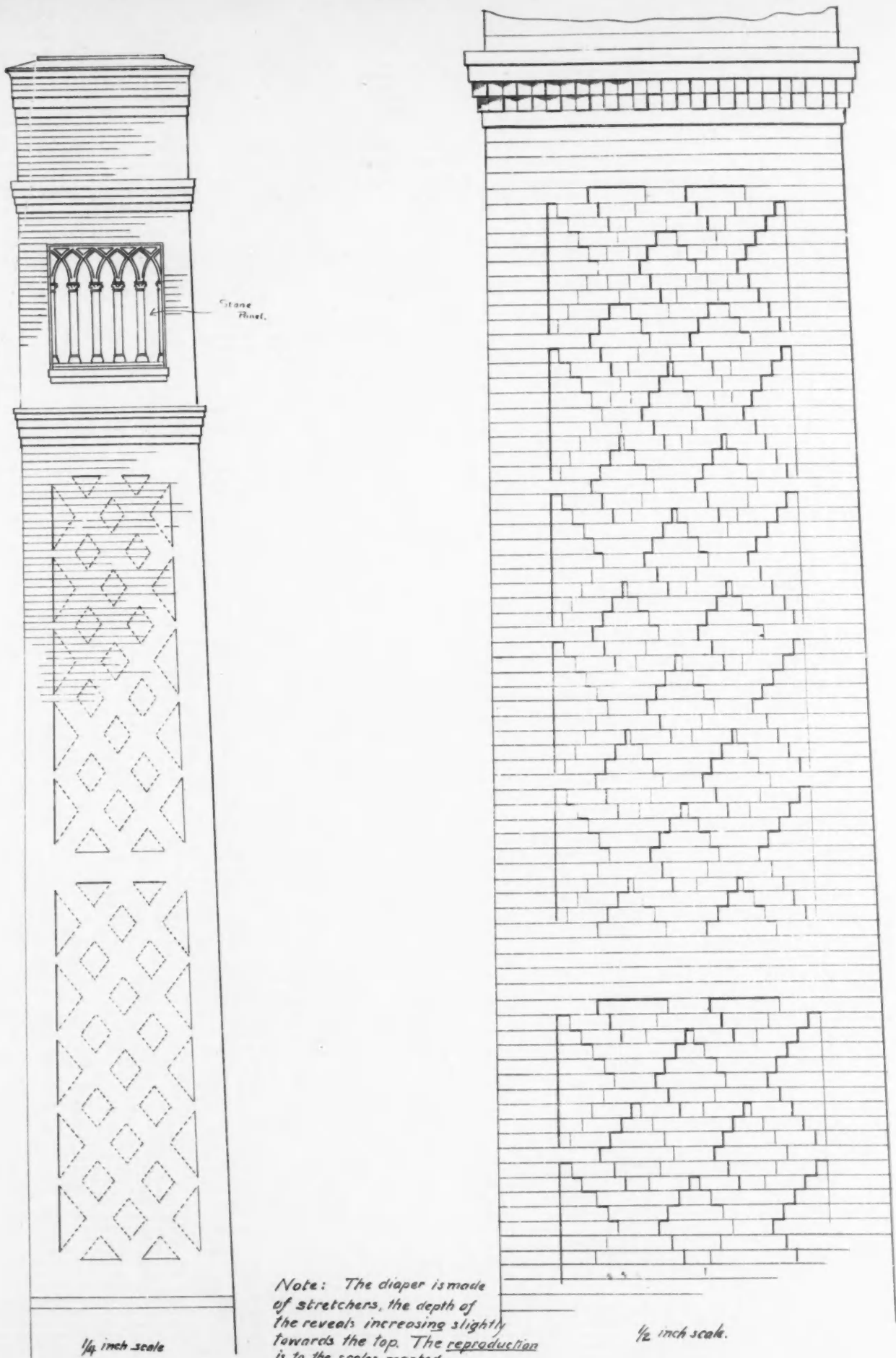
REPRODUCED FROM A PAGE IN "L'ART ARABE," BY PRISSE D'AVENNES.

fectured by the tread of feet.

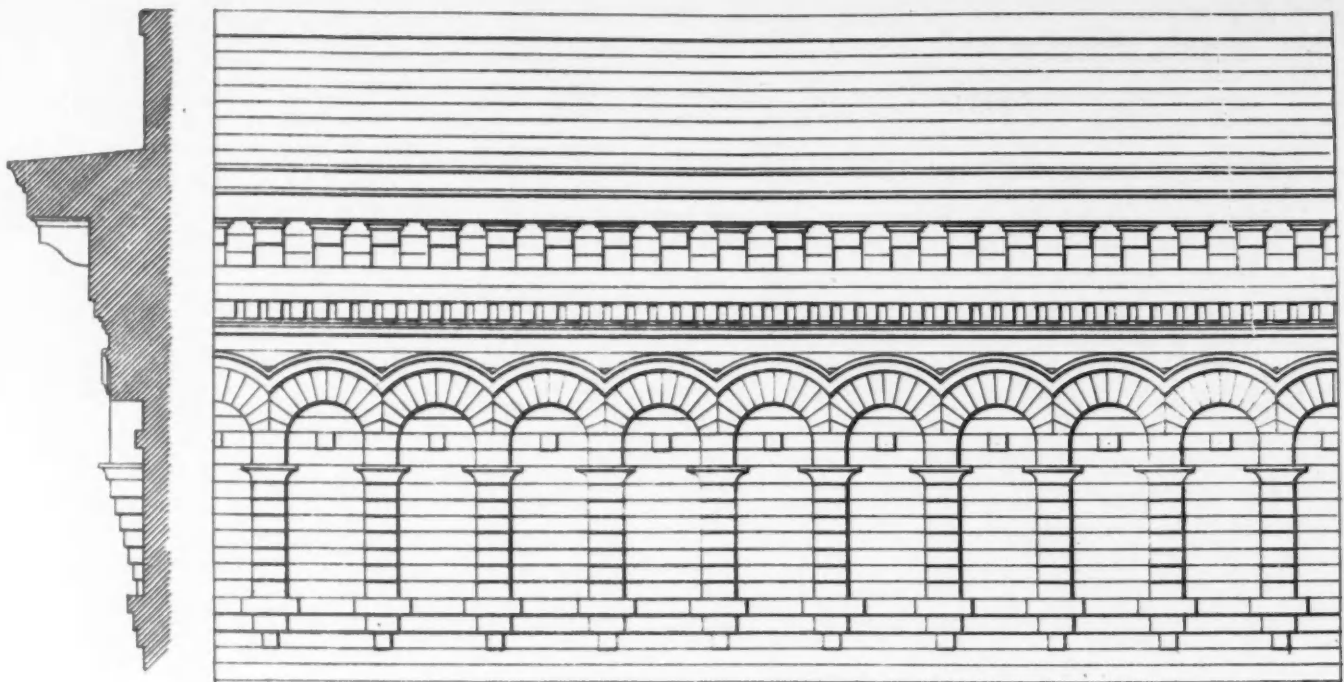
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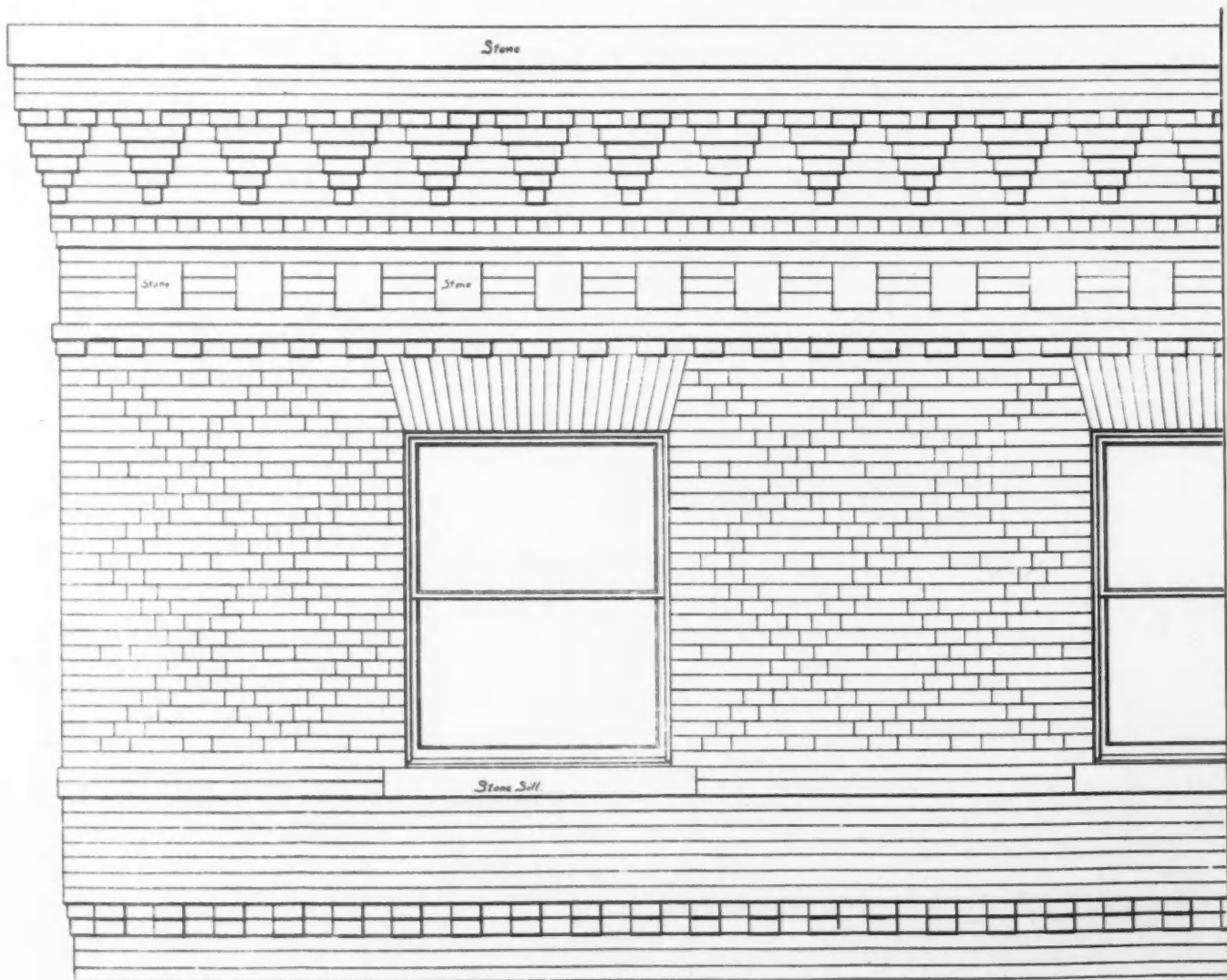
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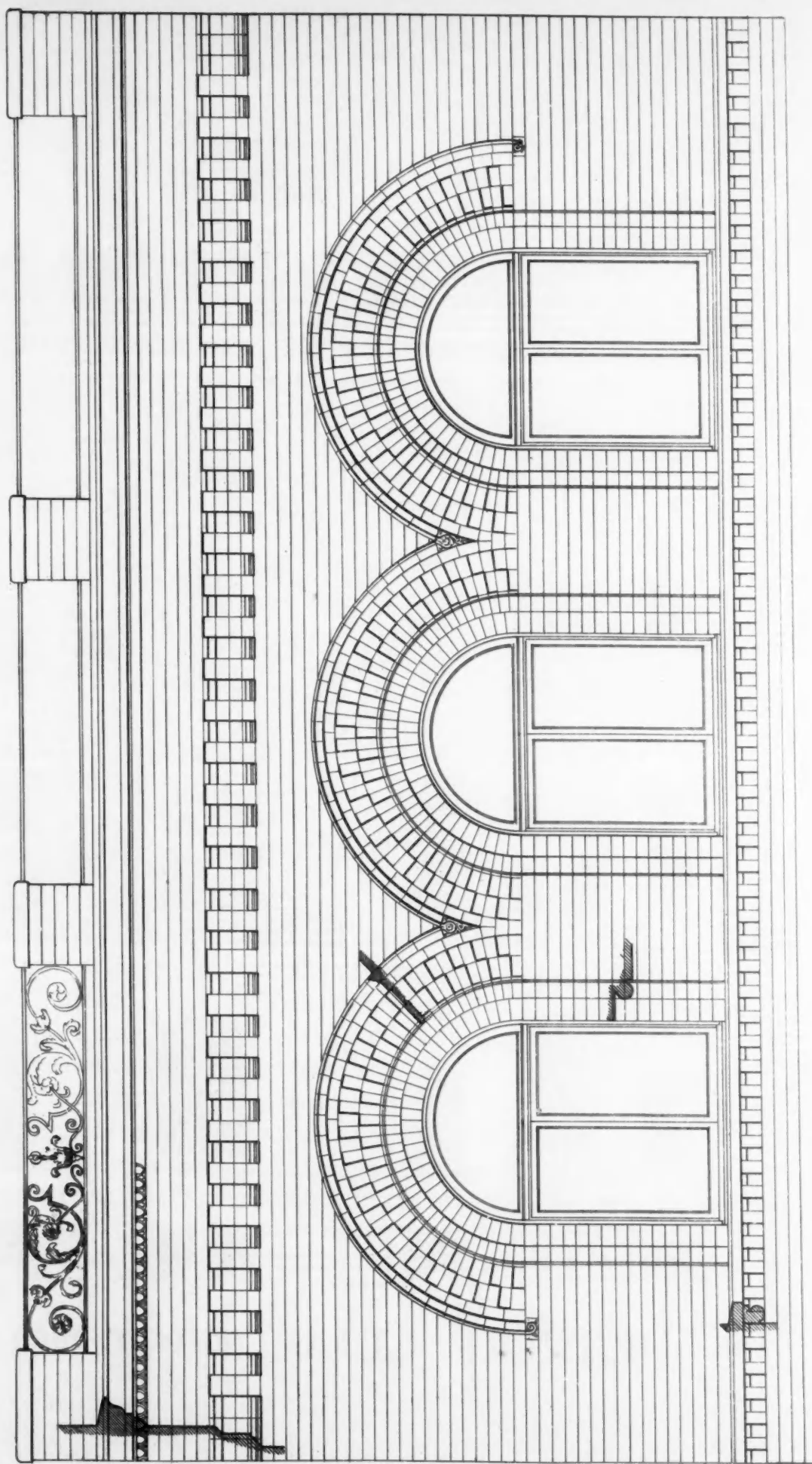


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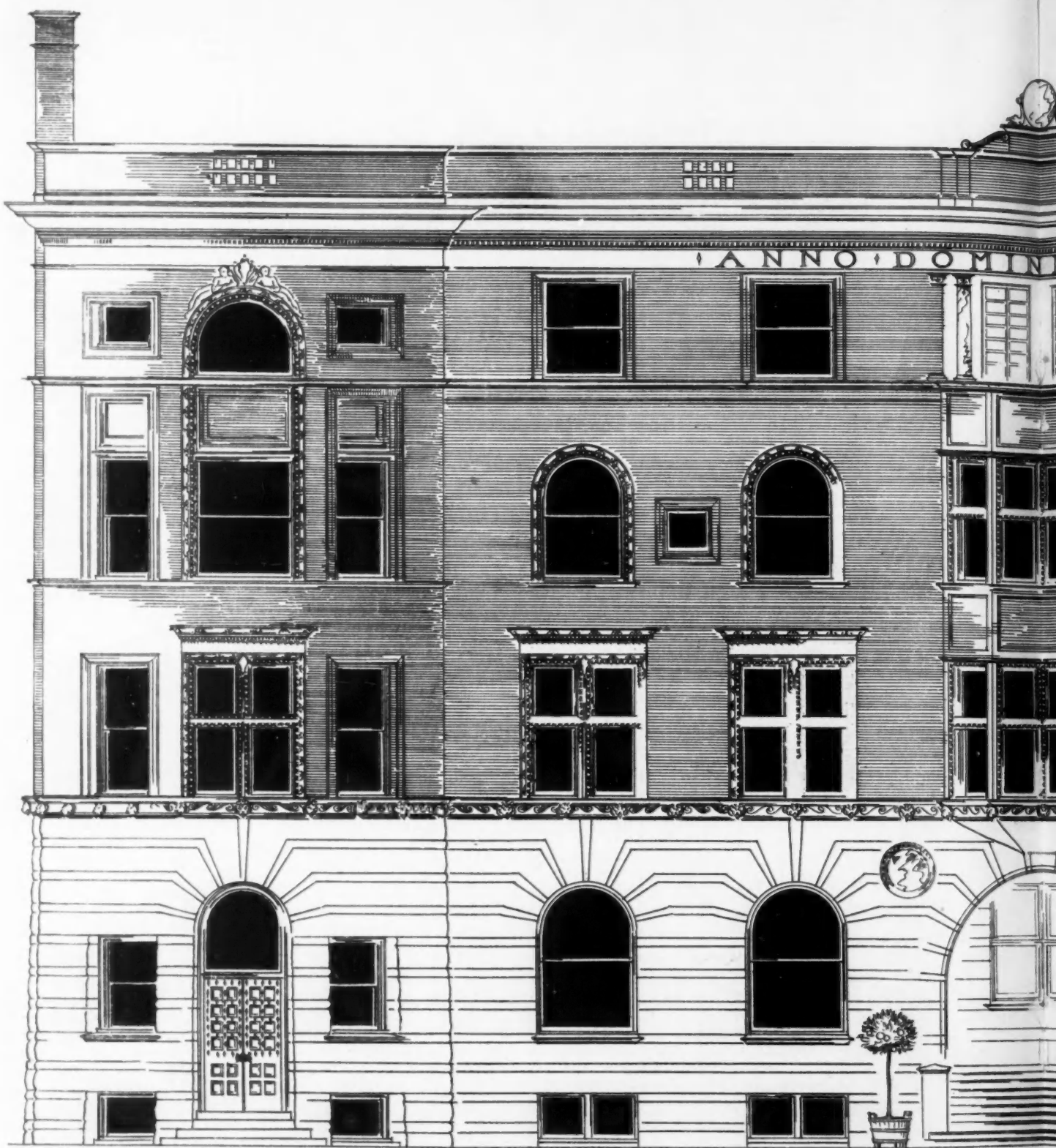


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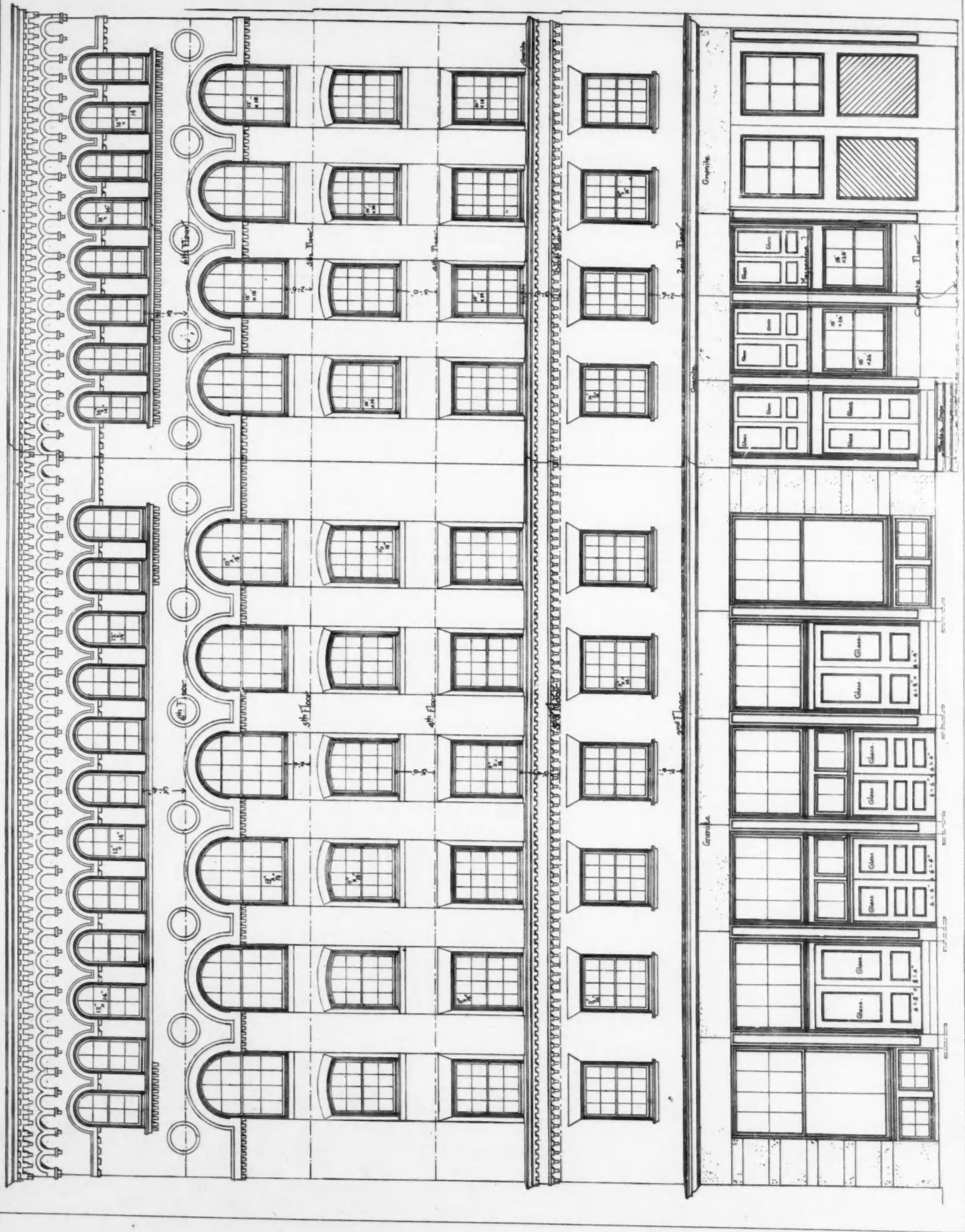


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THE BRICKBUILDER.

AN ILLUSTRATED MONTHLY DEVOTED TO THE ADVANCEMENT OF ARCHITECTURE IN MATERIALS OF CLAY.

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IN spite of the objections of "practical men," there is crying need of some good course of technical study to fit men for the carrying on of the clay-working business. Such a course should be pursued with special view to the work for which it is a preparation; but, after all, it is in the teaching of scientific methods that such a course is valuable. Let these "practical men" analyze their own progress before condemning technical education. We would ask them if their work has not been characterized by scientific methods. Have they not gained their knowledge by the collection of data from experience, by sorting out and classifying, perhaps unconsciously reaching by slower and more uncertain processes the results that the men trained in scientific methods would arrive at? A course at a good technical college teaches the student, first of all, order and method; nearly as important as these, and really inseparable from these, is exactness. In his laboratory work, be it in the chemical, the physical, or engineering departments, he is taught to observe, to make notes of his observations, to apply his previous knowledge to these observations, arranging and classifying them so that he may refer back to them for comparison with similarly arranged data secured from subsequent experiments. With some experience he is enabled to reason from former results what the results from new experiments should be. If these results do not verify his reasoning, if something unexpected turns up, his reasoning is either at fault or he has neglected to take into consideration some factor that has caused the variation. To ascertain this factor is his first operation.

A man with a fairly good head can, if he is earnest in his work, drill himself most thoroughly in scientific methods in a four years' course; and if he works with his future occupation in view he will be splendidly equipped for his business, upon leaving college. A few years as assistant superintendent where he can observe the application, on a large scale, of processes he thoroughly understands in theory, will place him in a position to carry on his work with comparatively little loss from the failure of

processes. With such a man the element of chance or good luck is unknown. For every effect he knows there *must* be a good cause. Is there any question which is the better method,—to blunder along, gaining knowledge by costly experience, or to devote several years to training the mind to work with method, with accuracy, and with certainty? In dollars and cents, the latter method would show a great balance to its credit.

In the manufacturing of iron and steel, paper, textile fabrics, in railroad management, in electrical works, bridge works, water supply and sewerage systems, and the many pursuits demanding scientific knowledge, we find these graduates of technical colleges, these "theoretical young gentlemen," at the very head of the practical work. There is nothing about the clay-working industries that places them beyond the comprehension of scientifically educated men.

There is no necessity of establishing a clay-working college. Any of the technical schools which have been successful in preparing men for other manufacturing businesses could arrange special courses combining geology, chemistry, mechanical engineering, and a little of physics, which could be followed to advantage in preparing for the clay-working business. There is, we believe, enough field among the larger clay-working plants to warrant young men in such schools as the Massachusetts Institute of Technology in pursuing special studies as we have indicated. There is no doubt in our mind that they would speedily find positions where they could soon demonstrate their usefulness.

THE enormous loss from fire, during the last ten years calls for the enactment of rigorous building laws by every city and town of importance. In almost every instance the fire has spread with such great rapidity that when the firemen reached the building their work seemed to produce no effect whatever. In the case of a fierce fire the firemen can seldom get close enough to the building to make their streams effective. Thrown from a distance, these streams spread into spray by the time they reach the blaze and they are at once converted into steam. This condition of affairs must threaten us so long as the majority of existing buildings offer every opportunity for the rapid spread of fire. A fireproof building erected in the midst of such buildings may stand through a conflagration raging on all sides, but its interior finish and its contents would be ruined. So far as fire within is concerned it is safe; but, if unprotected from a fire next door or across the street, it is an improvement only in one way: it will not allow a fire within it to spread, and it will not add to the fury of a fire. There can no longer be any question as to the absolute success of the fireproof system of construction when correctly carried out. It is an improvement upon methods of construction in Germany and France. The operations of a fire department in Berlin, moving with military formality, or the "garden engine" department of Paris, would be positively

ridiculous in our American cities. But were our construction as carefully guarded by building laws as that of Paris or Berlin, and if our existing buildings were not a standing menace, our present expensive fire departments would have no *raison d'être*.

While there are many patent fireproof materials in the market, the products of clay, tested by centuries, stand far in the lead. We know they are fireproof and we know they are enduring, a fact that the present generation will never know of most patented materials. This is a point to bear in mind. Architects are no longer erecting important buildings for a short life. Those buildings are expected to stand without great expense for repairs for generations. There are no materials save those of clay that practically answer all requirements.

IT is a curious fact that comparatively few architects understand that architectural faience is merely glazed or enamelled terra-cotta—that it can be made in any form that terra-cotta can be made in, and the coloring is at the command of the architect. This misunderstanding has made it a bugbear in the minds of many who regard it as some mysterious and experimental material that conservative practitioners had best steer clear of. This belief is so prevalent that a certain firm of manufacturers have decided hereafter to refer to it in their printed matter as "glazed or enamelled terra-cotta," rather than stick to the first adopted and more proper name of "faience."

AN important change in Eastern terra-cotta interests has been made by the combination of Messrs. Stephens, Armstrong & Conkling of Philadelphia, the Boston Terra-Cotta Company, and the New York Architectural Terra-Cotta Company, under the latter company. Messrs. Stephens, Armstrong & Conkling will continue as a Philadelphia branch of the New York company. The Boston Terra-Cotta works will be closed, the managers, Messrs. Fiske, Homes & Co., acting as New England agents for the New York company. This change will not affect the Fiske, Homes & Co. works in South Boston, where the manufacture of architectural faience and fire-flashed and Pompeian terra-cotta will be continued. This arrangement will, of course, cut down the number of competitors for terra-cotta work in the Eastern section of the country to two large concerns, the New York and the Perth Amboy companies. We are inclined to believe that this change will help the smaller companies rather than injure them, and it will certainly simplify matters so far as the architects are concerned.

FROM the natural course of things, railroads are the principal factors in developing the natural resources of the territory through which they pass, and doubtless many railroad men consider their work in this development finished when they have placed transportation facilities at the command of the people in this territory. But there are other roads that realize the vast advantages

resulting from the establishment of industries along their lines, and many of these have large industrial departments collecting and spreading information, offering inducements to manufacturers, and bringing new capital into the cities and towns on their lines. The Illinois Central is one of the most progressive of such roads, and Mr. George C. Power, the Industrial Commissioner of this road, has issued a very valuable and exceedingly well-arranged book, entitled "One Hundred Cities and Towns Wanting Industries"; these of course being located on the Illinois Central system.

In going over this book we find that thirty-nine out of the one hundred offer inducements in the way of clay, among other raw materials. Of these, twelve are in Illinois, twelve in Iowa, two in Kentucky, two in Louisiana, nine in Mississippi, one in Tennessee, and one in Wisconsin.

Of the towns especially desiring clay-working plants there are nineteen. Cedar Rapids and Osage, Ia., Amite, La., Clarksdale, McComb City, and Senatobia, Miss., want building-brick plants. Anna and Paxton, Ill., want general clay-working industries; Bloomington and Springfield, Ill., Sioux City, Ia., Baton Rouge, La., Holly Springs and Natchez, Miss., want paving-brick plants.

La Salle, Ill., already noted for a large, fine pressed-brick plant, is looking for building brick, paving brick, and general clay-working industries. It is a city of ten thousand population, has four lines of railroad, a large bank, waterworks, gas and electricity, and electric street cars. It is on the Illinois River, at the head of navigation and at the terminus of the Illinois & Michigan canal, and has available raw material in the way of fire clay, cement rock (suitable for the manufacture of Portland cement), coal, fine brick clay, common brick clay, and shale. It is only one hundred miles from Chicago.

Memphis, Tenn., Water Valley and Oxford, Miss., offer inducements for both building and paving brick plants. Water Valley is in the central part of Northern Mississippi. It has a population of 4,500, and modern improvements. For raw materials it offers manufacturers an abundance of brick clay, fine clay for earthenware, tiling, and fire brick. There is no brick plant within one hundred miles of this city.

Wickliffe, Ky., has an abundance of potters' clay, a splendid quality of clay for fire brick, and good clay for any of the higher grade of manufactures. Industries of this sort are especially desired. The town has a population of 1,100, is situated on high land on the Mississippi, three miles below the mouth of the Ohio, so that, with the Illinois Central and Mobile & Ohio Railroads, and the steamboat lines of both rivers, it has admirable transportation facilities.

The little book we have taken these points from should be consulted by every manufacturer considering a change of location. Complete information on any particular point will be readily supplied upon application to Mr. George C. Power, at the Chicago offices of the Illinois Central.



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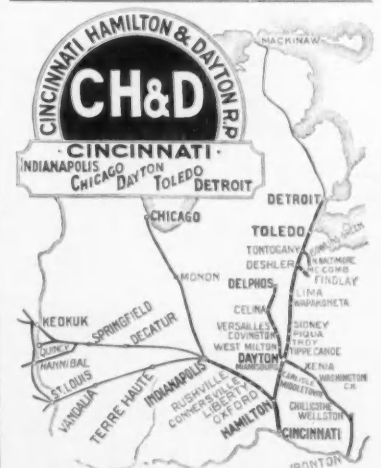
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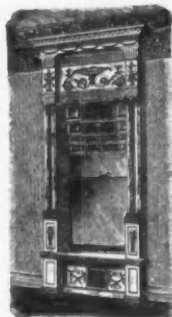
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